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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/543,125

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Brett T. Hannigan

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02/23/2006

DIGIMARC CORPORATION  
9405 SW GEMINI DRIVE  
BEAVERTON, OR 97008

EXAMINER

HESS, DANIEL A

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/543,125

Applicant(s)

HANNIGAN, BRETT T.

Examiner

Daniel A. Hess

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-10 and 13-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-7, 10, 13-21, 23, 33 and 34 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 22 and 24 is/are objected to.
- 8) ☒ Claim(s) 25-32 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/9/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Remarks Regarding Restriction Requirement***

Claims 25-32 remain under restriction requirement. Those are method claims which could be performed on any one of a number of scanners, not just the scanner in claim 33. All that is necessary in terms of hardware is a linear scanner (for claim 25) and an imager for other claims. Similarly, the apparatus or system of group 1 or claims 33 and 34 can follow a variety of methods other than the method of claim 25.

Thus claims 25-32 would still be restrictable from claims 33 and 34.

Therefore the restriction stands.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 3-7, 10, 13-20 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Kurowski (US 6,553,127).

Re claim 3:

For the sake of clarity, individual limitations of claim 3 are given below in italics, followed in each case by a discussion of how that limitation is met.

*In a scanner including a CPU, a memory, a linear sensor array, and first and second spaced-apart 2D sensor arrays serving as motion encoders, the CPU serving to process raw scan data collected by the linear sensor array from an imaged object into final scan data in accordance with scanner motion data provided from said 2D sensors, an improvement comprising*

This is a Jepson-style claim. See MPEP section 21.29 part III. All of the above is admitted to be known in the prior art. Confirmation can be seen in the Applicant's own specification on pages 1 and 2, where this scanner is admitted to be old.

*software instructions in the memory causing the scanner to discern a machine-readable identifier from the scan data acquired from the object,*

The prior art scanner of the Jepson claim, described in the prior art document "Processes for Freehand Image Capture: HP Capshare Technology" supplied by the Applicant shows that the scanner performs both text and image scanning. This qualifies as discerning machine-readable identifiers. Text and images here qualify as machine-readable identifiers.

*wherein said software instructions cause the CPU to process data from the 2D sensor arrays for a purpose in addition to sensing scanner motion.*

This aspect is lacking in the prior art admitted by the Applicant. But the limitation is actually very broad. The additional purpose could be anything.

Kurowski shows (see column 2, line 62 and column 4, lines 19-31) a way of processing raw data from an imager (which the Applicant's prior art scanner has) to extract watermark data.

In view of Kurowski's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known processing of raw data from an imager for the sake of watermark detection because many documents, including those that Kurowski deals with, have data embedded in watermarks, which must somehow be extracted. Kurowski's method of decoding needs a scanner / imager to work with and the Applicant's prior art scanner would be a reasonable one to work with.

Re claims 4, 10, 33 and 34: See discussion re claim 3, above.

Re claim 5: A 'calibration' signal could be anything used to mark an area where a watermark might be, including the 'selected characteristics' referred to throughout Kurowski, column 3.

Re claim 6, 13, 19: Kurowski teaches (column 3, lines 13-20) a two-technique process. The first technique can involve testing blocks on some criterion to see if they pass a preselection process. The second technique involves processing those candidates. Processing can be (column 3, lines 40-45) detecting the watermark (i.e. attempt to read / decode).

Kurowski fails to show which piece of scanning hardware is employed in the above scanning process. The applicant's admitted hardware device could be this piece of hardware.

In view of Kurowski's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known admitted prior art scanner for the process of Kurowski because a source capable of gathering 2-D images is needed to provide Kurowski's image data stream.

Re claim 7, 18: The criteria indicating improved odds of a watermark detection can include texture information (column 11, lines 55-65 of Kurowski).

See abstract: "The texture criterion measures a variation of selected characteristics associated with each element of the data stream, such as luminance and chrominance. " These types of information have a real correlation with physical texture.

Re claim 14: A 'calibration' signal could be anything used to mark an area where a watermark might be, including the 'selected characteristics' referred to throughout Kurowski, column 3.

Re claim 15: The criteria indicating improved odds of a watermark can include frequency information (column 11, lines 55-65 of Kurowski).

Re claim 16: See discussion re claim 13 above. The 'attribute information' referred to in this claim is another word for 'selected characteristics' referred to throughout column 3 of Kurowski.

Re claim 17: The criteria indicating improved odds of a watermark can include frequency information (column 11, lines 55-65 of Kurowski).

Re claim 20: Kurowski specifically aims to avoid 'brute force' processing of prior art systems. Thus, one can infer that higher rates of sampling are intended only for those blocks that are selected as described above and throughout Kurowski.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. (US 5,206,491).

The portion of the claim recited in the preamble describes components common generally to scanners. As Katoh shows (figures 2a and 2b) there are two spaced apart sensors employing different views to improving reading (decoding) of the data.

Katoh fails to show that the sensors are multi-element.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known multi-element sensing system for a single sensor in Katoh to handle cases of 2D codes to be read.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh as modified by the known art of multi-element sensing systems as applied to claim 21 above, in view of the applicant's prior art admissions.

Katoh fails to teach watermark detecting.

The applicant admits watermark systems in need of decoding. In view of the need shown by the applicant, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a two-view scanner to decode watermarks, because, as with any optically readable code, two views increase the odds that the code will be in range of at least one scanner.

*Response to Arguments*

As the Applicant will note, the Examiner is generally maintaining the present rejection.

As for allowability indication on claim 3 made previously, that indication was made in error and has already been withdrawn.

It is reiterated that these claims are in Jepson form, where all that precedes the words 'improvement comprising' is acknowledged to be old and well-known. What comes after this is the improvement.

The Examiner has carefully reconsidered the applicant's arguments and has the following basic stance:

(A) If the functionality claimed in the body is functionality that is very common across many scanners, and if the scanner of the preamble has the sensors available, it would have been obvious to one of ordinary skill in the art to design the scanner of the preamble with the claimed functionality.

Why?

Because all that would be required are programming modifications to take advantage of the available scanners to achieve functionality that is already known to be valuable.



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(B) If, on the other hand, the functionality claimed in the body is not common across many scanners, and if this functionality requires **the interplay of** a particular set of components which most scanners do not have, the claim is more likely to be allowable. In the Instant Application, most of the additional features / functions only require one component of the preamble scanner, and thus are rejectable under obviousness with a scanner that has that component and the claimed function.

As an example of the former, claim 6 is herein rejected because “identifying areas more likely to include detectable identifier data” is a capability that is broadly found in scanners which does not require special capability recited in the instant application.

While the scanner of the preamble may not have that recited functionality, there is both hardware for it and teachings/motivations from other art.

**The argument that combination would not have been obvious because the prior art scanner has extra features is not valid.** There is nothing inherently wrong with a scanner having many features.

It is not ‘teaching away’ if certain hardware already has other uses. Teaching away is based on the principle that to add certain features would cause other features not to work. That is not the case here.

Therefore the Applicant’s argument that the scanner hardware would not have been used for other purposes because it already has existing purposes does is not convincing.

Regarding newly added limitations about texture, Kurowski teaches  
See abstract: "The texture criterion measures a variation of selected characteristics associated with each element of the data stream, such as luminance and chrominance. " These types of information have a real correlation with physical texture.

***Allowable Subject Matter***

Claims 8, 9, 22 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Assesses relative distances and applying compensations as additional purposes for the recited spaced-apart 2-D sensor arrays in the context of the various limitations upon which the claims depend is neither taught nor suggested in the prior art of record.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Hess whose telephone number is (571) 272-2392. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DH

Daniel A Hess  
Examiner  
Art Unit 2876

**DANIEL STCYR  
PRIMARY EXAMINER**

